

Application Serial No. 10/738,397
Reply to office action of August 10, 2006

PATENT
Docket: CU-3496

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (currently amended) A method for fabricating a semiconductor device, which comprises the steps of:

forming a gate line on a semiconductor substrate;

forming successively a buffer layer ~~and~~, a spacer nitride film, and a spacer oxide film on the entire surface of the substrate including the gate line;

selectively etching the buffer layer and the spacer nitride film in such a manner that they remain on both sides of the gate line;

performing an ion implantation process using the remaining buffer layer and spacer nitride film as a barrier film to form junction regions in the semiconductor substrate at both sides of the gate line;

subjecting the entire upper portion of the substrate including the junction regions to a rapid thermal annealing (RTA) process;

forming an interlayer insulating film on the entire upper portion of the resulting substrate;

selectively removing the interlayer insulating film to form contact holes exposing the upper surface of the junction regions; and

forming contact plugs in the contact holes.

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2. (canceled)
3. (currently amended) The method of claim ~~[[2]]~~ 1, wherein the buffer layer is in the form of a laminated structure of an oxide film and a nitride film, a single-layered oxide film, or a single-layered nitride film.
4. (currently amended) The method of claim ~~[[2]]~~ 1, wherein the spacer nitride film is formed to a thickness of 100-700 Å.
5. (currently amended) The method of claim ~~[[2]]~~ 1, wherein the ion Implantation process is performed using a given tilt angle and a given number of rotations.
6. (original) The method of claim 5, wherein the tilt angle is 0 to 30° and the number of rotations is 2 to 4.
7. (canceled)
8. (original) The method of claim 1, which additionally comprises the step of performing a rapid thermal annealing (RTA) process after the step of forming the interlayer insulating film.
9. (original) The method of claim 1, which additionally comprises the step of

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subjecting the interlayer insulating film to a reflow annealing process and a rapid thermal annealing process after the step of forming the interlayer insulating film.

10. (original) The method of claim 1, which additionally comprises the step of performing a high temperature rapid thermal annealing process before forming the contact plugs, and the step of a low temperature rapid thermal annealing process after forming the contact plugs.

11. (currently amended) The method of any of claim 8, ~~9 and 10~~, wherein the buffer layer is in the form of a laminated structure of an oxide film and a nitride film, a single-layered oxide film, or a single-layered nitride film.

12. (currently amended) The method of any of claim 8, ~~9 and 10~~, wherein the spacer nitride film is formed to a thickness of more than 90 Å.

13. (currently amended) The method of any of claim 8, ~~9 and 10~~, wherein the ion implantation process is performed using a given tilt angle and a given number of rotations.

14. (original) The method of claim 13, wherein the tilt angle is 0 to 30° and the number of rotations is 2 to 4.

15. (canceled)

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16. (new) The method of Claim 9, wherein the buffer layer is in the form of a laminated structure of an oxide film and a nitride film, a single-layered oxide film, or a single-layered nitride film.
17. (new) The method of claim 9, wherein the sapacer nitride film is formed to a thickness of more than 90 Å.
18. (new) The method of Claim 9, wherein the ion implantation process is performed using a given tilt angle and given number of rotations.
19. (new) The method of claim 18, wherein the tilt angle is 0 to 30 ° and the number of rotations is 2 to 4.
20. (new) The method of claim 10, wherein the buffer layer is in the form of a laminated structure of an oxide film and a nitride film, a single-layered oxide film, or a single-layered nitride film.
21. (new) The method of claim 10, wherein the spacer nitride film is formed to a thickness of more than 90 Å.
22. (new) The method of claim 10, wherein the ion Implantation process is performed using a given tilt angle and a given number of rotations.

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23. (new) The method of claim 22, wherein the tilt angle is 0 to 30 ° and the number of rotations is 2 to 4.